

***Double Patenting***

Claims 21-25, 27, 31-36 and 43 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,116,138 in view of Crosby and Roche. Claim 3 of U.S. Patent No. 6,116,138 claims a hydraulic transformer converting a first fluid flow having a first pressure into a hydraulic power of a second fluid flow having a second pressure by supplying or discharging a third fluid flow having a third pressure, comprising a rotor freely rotatable in a housing, chambers varying in volume between a minimum and a maximum (claim 1 line 1-13), and a face plate provided with face plate conduits for alternatingly connecting the fluid chambers with three line connections, which face plate is rotatable around a rotation axis by an adjustment means, and is provided with means for, without interruption, keeping a face plate conduit in communication with the respective line connection (claim 3 line 1-5); but does not claim that the transformer is part of an apparatus, which includes a high pressure line solely connecting a pressure source to the transformer, a connecting line connecting a hydromotor to the transformer; and a tank connected to the transformer or the connecting line; a control means controlling the adjustment means and including a sensor for measuring flow in the connecting line; with the sensor either being a flow sensor in the connecting line or high pressure line, a movement sensor for measuring the rotor's rate of rotation, or for measuring the hydromotor's rate of movement; that the hydromotor is a linear cylinder, and the hydraulic system includes means for supplying fluid to the cylinder from the low-pressure line; that the pressure source is an aggregate and the control means are adjusted such that the hydromotor uses less power than an adjustable value, which is a portion of the power the aggregate is capable of supplying; that the maximum volume is maximally three times the minimum volume; or that there is between nine and twelve chambers.

Crosby teaches, for a hydraulic transformer provided with a rotor (e.g. 10, 12, 14) and an adjustment means (including 36) controlling a continuously variable setting of the transformer; that the transformer is part of a fluid system comprising a connecting line (28) solely connecting the transformer to a hydromotor (M); high (18) and low (30)

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pressure lines solely connecting the transformer to a pressure source (P) and to a tank, respectively; and a control means controlling the adjustment means to control the pressure in the connecting line, including a sensor for measuring pressure (via line 38) in the connecting line, and that the control means can include a variety of other systems, not all directly responsive to pressure in the connecting line (column 3 line 3-6).

Since claim 3 of U.S. Patent No. 6,116,138 and Crosby are from the same field of endeavor, the system using the transformer of Crosby would have been appropriate for the transformer of 3 of U.S. Patent No. 6,116,138. It would have been obvious at the time the invention was made to one having ordinary skill in the art to use the transformer of claim 3 of U.S. Patent No. 6,116,138 in a system wherein a connecting line solely connecting the transformer to a hydromotor; high and low pressure lines solely connecting the transformer to a pressure source and to a tank, respectively; and a control means, including a sensor, controlling the adjustment means to control the pressure in the connecting line, as taught by Crosby, as a matter of engineering expediency.

Roche teaches, for a fluid system comprising a hydraulic transformer (e.g. including 278, 286), provided with a rotor (see above) and an adjusting means (including 298, 300), connected to a hydromotor by a connecting line (e.g. 276); high (e.g. 272) and low (e.g. 296) pressure lines for transporting fluid to and from the transformer; and a control means controlling the adjustment means to control the pressure in the connecting line, including a sensor; that the sensor is a flow sensor (e.g. 366) measuring the flow in the connecting line between the transformer and the hydromotor.

Applicant's admitted prior art (since the official notice was not challenged in the reply to the last office action) teaches that flow to a hydromotor from a transformer can be measured by a number of sensors, which include a movement sensor for measuring the rotor's rate of rotation, and a movement sensor for measuring the hydromotor's rate of movement. It would have been obvious at the time the invention was made to one having ordinary skill in the art to use a sensor which measures flow in the connecting

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line as the sensor of the modified claim 3 of U.S. Patent No. 6,116,138, as taught by Roche, wherein the sensor is either a flow sensor which measures the flow in the connecting line between the transformer and the hydromotor, as taught by Roche, or which includes either a movement sensor for measuring the rotor's rate of rotation, or a movement sensor for measuring the hydromotor's rate of movement, as a matter of engineering expediency.

Applicant's admitted prior art (since the official notice was not challenged in the reply to the last office action) teaches that a hydromotor can be a linear cylinder, and that hydraulic systems include means for supplying fluid to the cylinder from the low-pressure line, to prevent cavitation. It would have been obvious at the time the invention was made to one having ordinary skill in the art to make the hydromotor of the modified claim 3 of U.S. Patent No. 6,116,138 a linear cylinder, as a matter of engineering expediency, with means for supplying fluid to the cylinder from the low-pressure line, to prevent cavitation.

Applicant's admitted prior art (since the official notice was not challenged in the reply to the last office action) teaches that it is well known to use a plurality of pumps for a pressure source, with each pump being brought online to deliver more power, as demanded. It would have been obvious at the time the invention was made to one having ordinary skill in the art to use a plurality of pumps for the pressure source of the modified claim 3 of U.S. Patent No. 6,116,138, with each pump being brought online to deliver more power, as demanded, as a matter of engineering expediency (i.e. the pressure source is an aggregate). It is clearly understood that the control means are adjusted such that the hydromotor uses a minimum amount of power, which is less power than an adjustable value, which is a portion of the power the aggregate is capable of supplying.

### ***Claim Rejections - 35 USC § 103***

Claims 21-25, 27 and 30-32 are rejected under 35 U.S.C. § 103 as being unpatentable over Crosby in view of Roche. Crosby discloses a fluid system comprising a hydraulic transformer provided with a rotor (e.g. 10, 12, 14) and an adjusting means

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(including 36) controlling a continuously variable setting of the transformer; a connecting line (28) solely connecting the transformer to a hydromotor (M); high (18) and low (30) pressure lines solely connecting the transformer to a pressure source (P) and to a tank, respectively; and a control means controlling the adjustment means to control the pressure in the connecting line, including a sensor for measuring pressure (via line 38) in the connecting line, and that the control means can include a variety of other systems, not all directly responsive to pressure in the connecting line (column 3 line 3-6); but does not disclose that the sensor measures flow in the connecting line, the sensor either being a flow sensor in the connecting line or high pressure line, a movement sensor for measuring the rotor's rate of rotation, or for measuring the hydromotor's rate of movement; that the hydromotor is a linear cylinder, and the hydraulic system includes means for supplying fluid to the cylinder from the low-pressure line; or that the pressure source is an aggregate and the control means are adjusted such that the hydromotor uses less power than an adjustable value, which is a portion of the power the aggregate is capable of supplying.

Roche teaches, for a fluid system comprising a hydraulic transformer (e.g. including 278, 286), provided with a rotor (see above) and an adjusting means (including 298, 300), connected to a hydromotor by a connecting line (e.g. 276); high (e.g. 272) and low (e.g. 296) pressure lines for transporting fluid to and from the transformer; and a control means controlling the adjustment means to control the pressure in the connecting line, including a sensor; that the sensor is a flow sensor (e.g. 366) measuring the flow in the connecting line between the transformer and the hydromotor.

Applicant's admitted prior art (since the official notice was not challenged in the reply to the last office action) teaches that flow to a hydromotor from a transformer can be measured by a number of sensors, which include a movement sensor for measuring the rotor's rate of rotation, and a movement sensor for measuring the hydromotor's rate of movement. It would have been obvious at the time the invention was made to one having ordinary skill in the art to use a sensor which measures flow in the connecting line in place of the pressure sensor of Crosby, as taught by Roche, wherein the sensor

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is either a flow sensor which measures the flow in the connecting line between the transformer and the hydromotor, as taught by Roche, or which includes either a movement sensor for measuring the rotor's rate of rotation, or a movement sensor for measuring the hydromotor's rate of movement, as a matter of engineering expediency.

Applicant's admitted prior art (since the official notice was not challenged in the reply to the last office action) teaches that a hydromotor can be a linear cylinder, and that hydraulic systems include means for supplying fluid to the cylinder from the low-pressure line, to prevent cavitation. It would have been obvious at the time the invention was made to one having ordinary skill in the art to make the hydromotor of Crosby a linear cylinder, as a matter of engineering expediency, with means for supplying fluid to the cylinder from the low-pressure line, to prevent cavitation.

Applicant's admitted prior art (since the official notice was not challenged in the reply to the last office action) teaches that it is well known to use a plurality of pumps for a pressure source, with each pump being brought online to deliver more power, as demanded. It would have been obvious at the time the invention was made to one having ordinary skill in the art to use a plurality of pumps for the pressure source of Crosby, with each pump being brought online to deliver more power, as demanded, as a matter of engineering expediency (i.e. the pressure source is an aggregate). It is clearly understood that the control means are adjusted such that the hydromotor uses a minimum amount of power, which is less power than an adjustable value, which is a portion of the power the aggregate is capable of supplying.

### ***Conclusion***

Claims 28, 29, 37-42, 44 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

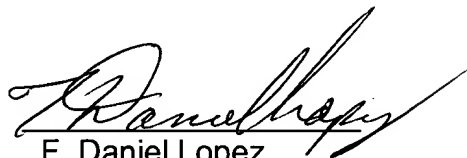
**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is (703) 308-0008. The examiner can normally be reached on Monday-Thursday from 6:30 AM -4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on (703) 308-1044. The fax number for this group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.

A handwritten signature in black ink, appearing to read "F. Daniel Lopez", with a long, sweeping horizontal stroke extending to the right.

F. Daniel Lopez  
Primary Examiner  
Art Unit 3745  
November 05, 2003



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1	EXIN	4

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## APPL PARTS

IMIS
Internal Misc. Paper
LET
Misc. Incoming Letter

371P  
PCT Papers in a 371 Application

A...  
Amendment Including Elections

ABST  
Abstract

ADS  
Application Data Sheet

AF/D  
Affidavit or Exhibit Received

APPENDIX  
Appendix

ARTIFACT  
Artifact

BIB  
Bib Data Sheet

CLM  
Claim

COMPUTER  
Computer Program Listing

CRFL  
All CRF Papers for Backfile

DIST  
Terminal Disclaimer Filed

DRW  
Drawings

FOR  
Foreign Reference

FRPR  
Foreign Priority Papers

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IDS Including 1449

NPL  
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SEQLIST  
Sequence Listing

SPEC  
Specification

SPEC NO  
Specification Not in English

TRNA  
Transmittal New Application

CTNF  
Count Non-Final

CTRS  
Count Restriction

3/30/04 EXIN  
Examiner Interview

M903  
DO/EO Acceptance

M905  
DO/EO Missing Requirement

NFDR  
Formal Drawing Required

NOA  
Notice of Allowance

PETDEC  
Petition Decision

## OUTGOING

CTMS
Misc. Office Action

1449  
Signed 1449

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Abandonment

APDEC  
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APEA  
Examiner Answer

CTAV  
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CTEQ  
Count Ex parte Quayle

CTFR  
Count Final Rejection

## INCOMING

AP.B  
Appeal Brief

C.AD  
Change of Address

N/AP  
Notice of Appeal

PA..  
Change in Power of Attorney

REM  
Applicant Remarks in Amendment

XT/  
Extension of Time filed separate

BACKFILE DOCUMENT INDEX SHEET

### Internal

SRNT  
Examiner Search Notes

CLMPTO  
PTO Prepared Complete Claim Set

ECBOX  
Evidence Copy Box Identification

WCLM  
Claim Worksheet

WFEE  
Fee Worksheet

### File Wrapper

FWCLM  
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09/601,961	08/25/2000	Peter Augustinius Johannes Achten	7238/OH418	5233

7590 03/30/2004  
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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.